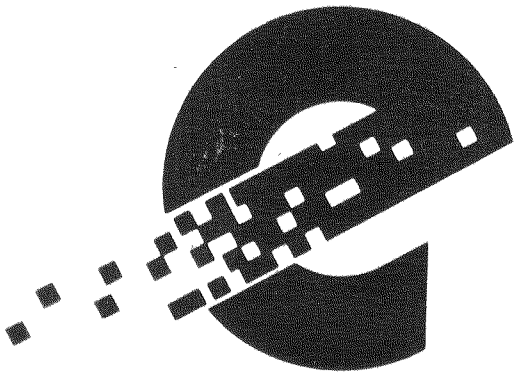


Environmental Consultant Company

PREPARED FOR:

INTERMOUNTAIN POWER SERVICE CORPORATION
DELTA, UTAH
OCTOBER 15, 1999
TLN 349G

Environmental Consultant Company
dedicated to filtration science . . .

P.O. Box 42537 • Phoenix, AZ 85080
602-582-5155 • Fax 602-581-9264
Laboratory: 2501 W. Behrend Dr., Suite 77 • Phoenix, AZ 85027

REPORT
INTERMOUNTAIN POWER SERVICE CORPORATION

Reference: Unit 2 – Coal Fired Boiler System

One reverse air style filter bag was submitted for evaluation. The bag has been in service since July and the baghouse is experiencing elevated pressure differentials.

The submitted bag did exhibit some degree of low flows predominately in the bottom bag area. The middle and upper bags yielded nominal throughput permeability characteristics.

The bag bottom area up to the third ring did exhibit ash dust agglomerations as shown by **Photo A**.

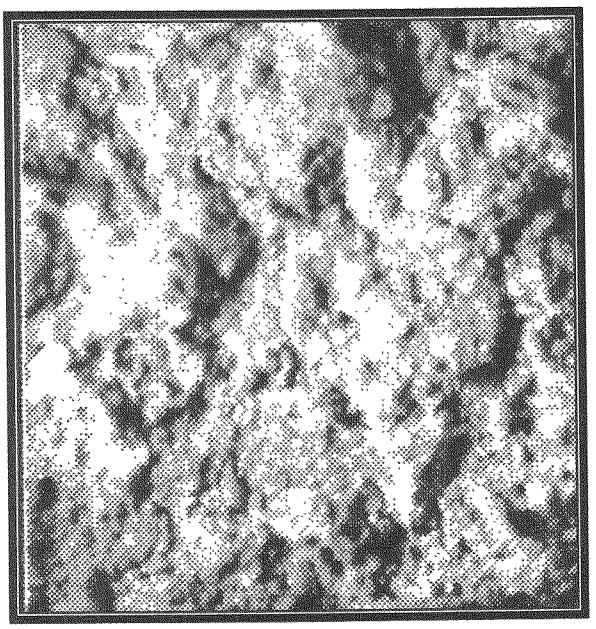


Photo A

In contrast, the middle zone (**Photo B**) and the top **(Photo C**) reveal a significantly different cake structure compared to the bottom area.

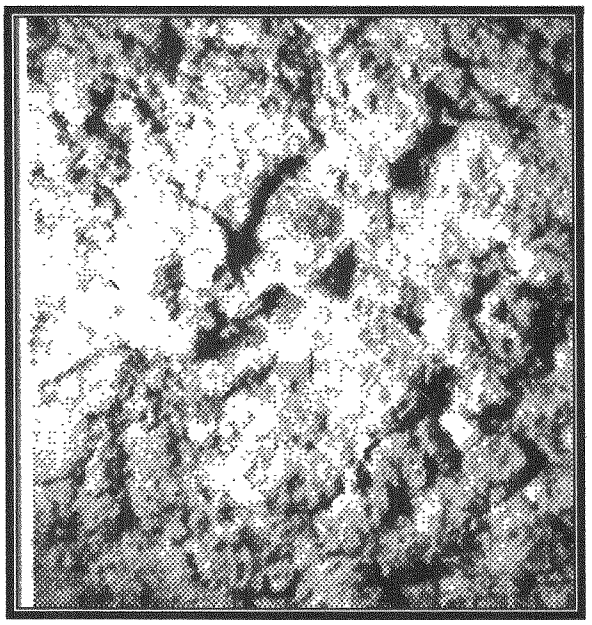


Photo B

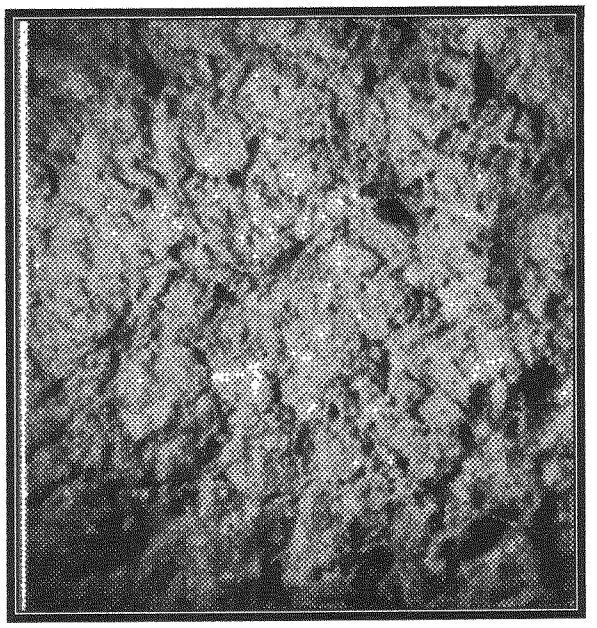


Photo C

The average as received permeabilities are at 2.827 CFM which is rated at generally low acceptances and comparable to past Unit 2 flows as received (TLN604C) on the previous set of bags.

Again, the restriction to capacity is restricted to the bottom area of the bag.

Reverse air flows allowed very good ash dust discharge with collection surface void recovery evident in the upper bag areas.

Photo D is a view of the good discharge characteristics off the collection surface.

Photo D

Photo E

The bottom area continued to retain the dense agglomerated dust with low voids within the structure as shown by **Photo E**.

The dust was extracted in the bottom agglomerated area and yielded hygroscopic calcium sulphate as the binder of the nodula formation.

The level of sulphates compared to the upper area extracts were extremely comparable.

It is evident that this bag experienced moisture contamination limited the bottom area and contacted the hygroscopic ash sulphates generating the dense structure.

The level of effected area is low compared to the overall bag length however, has reduced the overall capacity acceptance averages.

Physical strengths and flex declines are the result of normal adjustment in values from environmental exposures.

There is no chemical, thermal or abnormal deterioration evident in full profile.

All spreader ring covers revealed no contact abrasion indicative of good tensioning and no bag to bag sway contact.

Further, the lines of collapse are at good equal distant/intensity further indicative of good upward tensioning forces.

Prepared for: INTERMOUNTAIN POWER SER

Date: 10/15/1999
TLN : 349G
Page:

Identification: UNIT 2

Fiber Content: FIBERGLASS ECDE

Fabric Construction: WOVEN

Weave: 3 X 1 TWILL

Count: 44 X 24

Yarn System- Warp/Length: 37-1/0F

Filling Width: 75-1/0F+75-1/2T

Avg. Weight [oz/sq yd]: 13.43

Thickness [inches]: .015

Density Factor: .691

Treatment- Physical Type: NONE

Chemical Type: ACID RESISTNAT

% Ignition Loss [LOI] ---> 500°F/1 Hr: 0.02%

1150°F/1 Hr: 4.01%

% Extractable Matter: CALCIUM SULPHATE

Acid Alkaline [PH]: 10.98

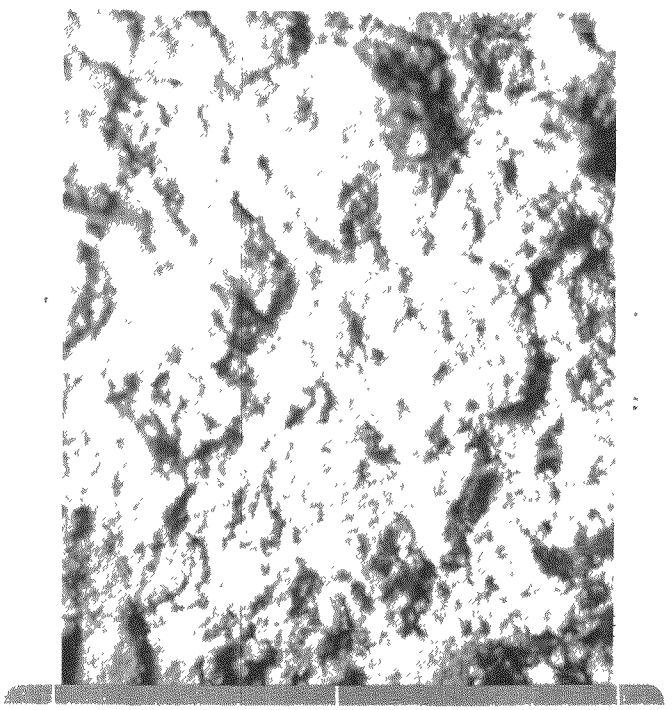
Fabrication

Seaming: TRIPLE CHAIN
Cuffing: DOUBLE LOCK
Ring Cover: DOUBLE LOCK

Hardware: CR
Sewing Thread: FIBERGLASS ECB
Fabrication Rating: GOOD

PROFILE DATA			TOP	CENTER	BOTTOM
Weight [oz/sq yd]	As Received		23.88	23.71	25.95
	Cleaned (Vacuum)		18.61	18.52	20.40
	Cleaned (Washed)		13.44	13.46	13.40
Permeability CFM/sq ft @ .5" H2O	As received		3.38	3.13	1.97
	Cleaned (Vacuum)		8.5	8.3	4.6
	Cleaned (Washed)		46.8	48.0	46.1
Breaking Strength lbs/inch	Warp/Length		494	503	498
	Filling/Width		339	344	335
Breaking Strength % Loss	Warp/Length	@ 500	1.20%	0%	0.40%
	Filling/Width	@ 250	3.14%	1.71%	4.29%
Mullen Burst (lbs/sq inch)			731	734	726
Mullen Burst % Loss		@ 750	2.53%	2.13%	3.20%
Flex Cycles [MIT Method]	Warp		46983	47131	47415
	Fill		9647	9812	9683
Flex Cycles % Loss	Warp	@ 50,000	6.034%	5.74%	5.17%
	Fill	@ 10,000	3.53%	1.88%	3.17%
Other Testing					

IP12_006517



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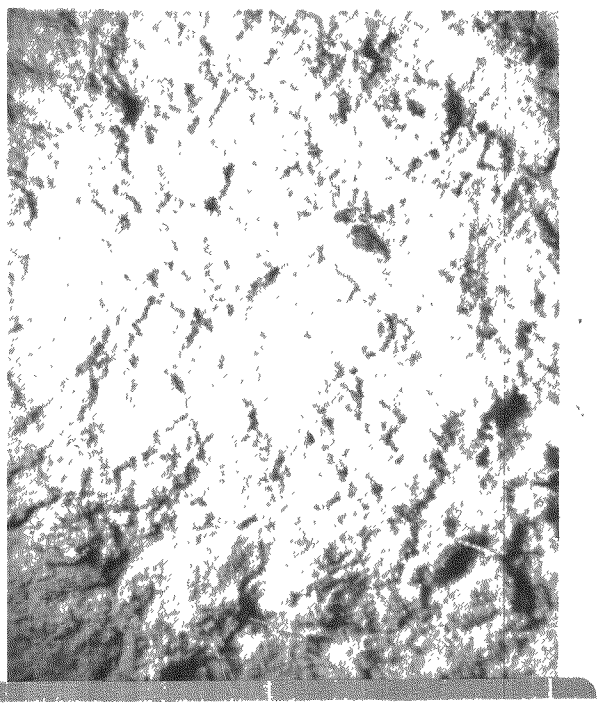


PHOTO C

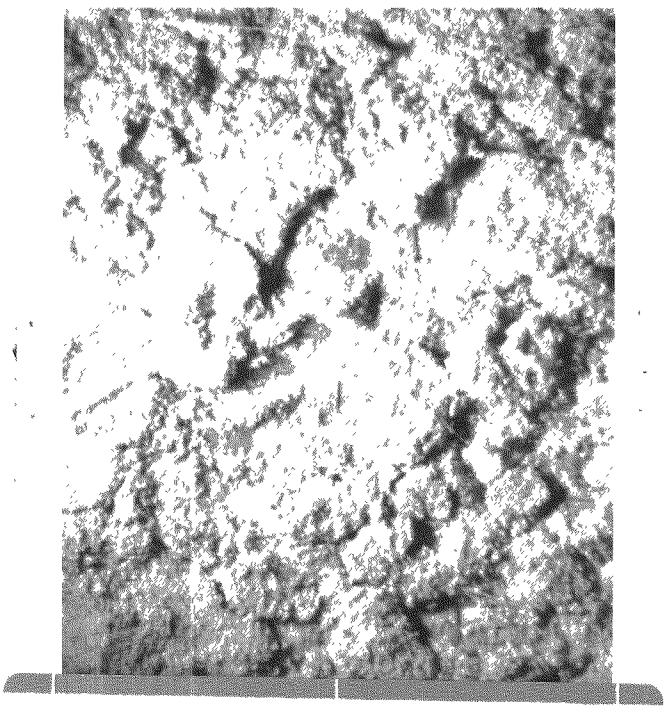


PHOTO B

PHOTO D

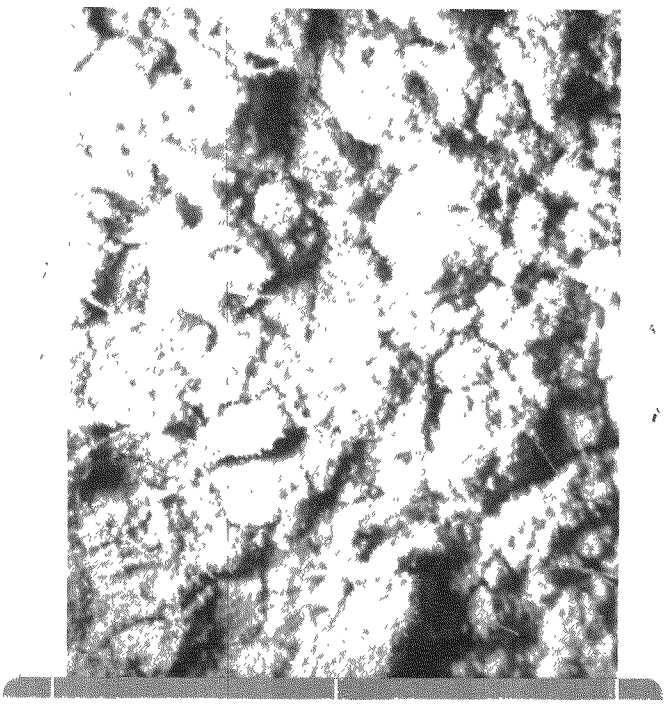
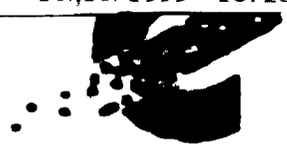


PHOTO E



Environmental Consultant Co., Inc.

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Mailing:	**P. O. Box 42537 Phoenix, Az 85080**
Telephone:	**(602) 582-5155**
FAX:	**602) 581-9264**

Fax

To: John Howard **From:** Kathy

Fax: 435-864-6670 **Pages:** 7

Co.: **Date:** 10-15-99

Re: TLN 3496- Unit 2

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

The formal report copy will be mailed to your attention. Please do not hesitate to contact us if you have any questions about the report.

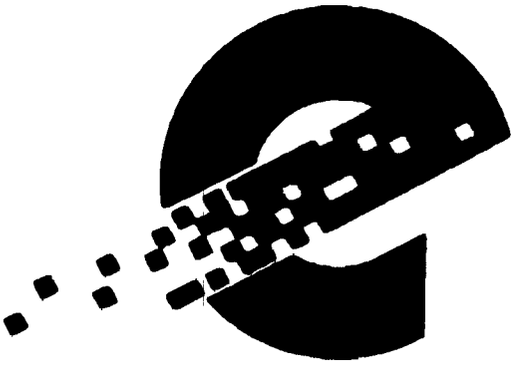
Thank you for choosing Environmental Consultant Company for your testing needs.

Second report will be issued early next week.

Dean - Budrow

ECC

IP12_006520



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October 15, 1999
TLN 349G
Page 1

REPORT
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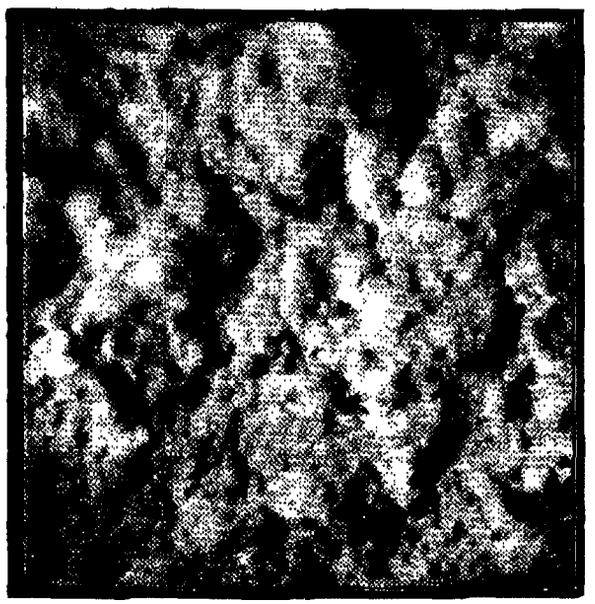

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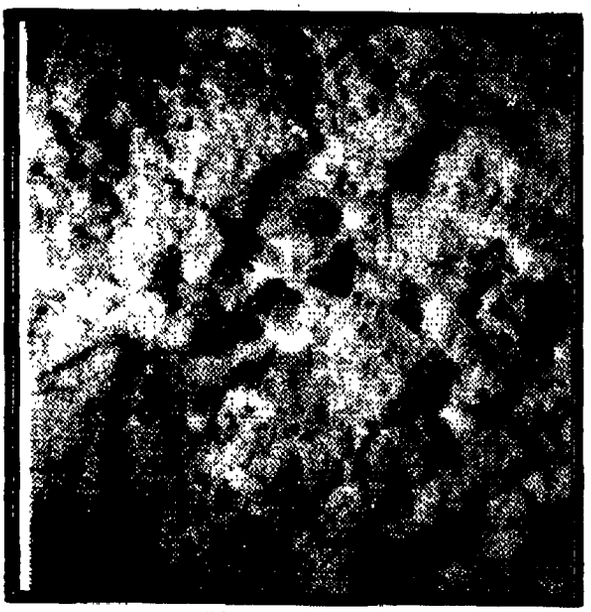

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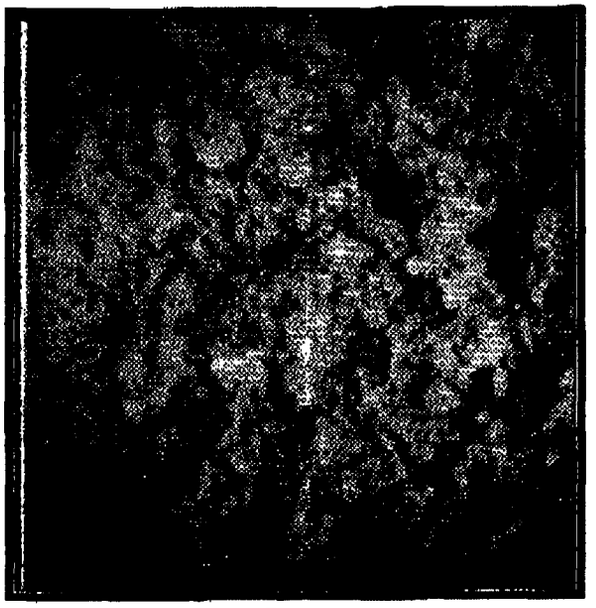

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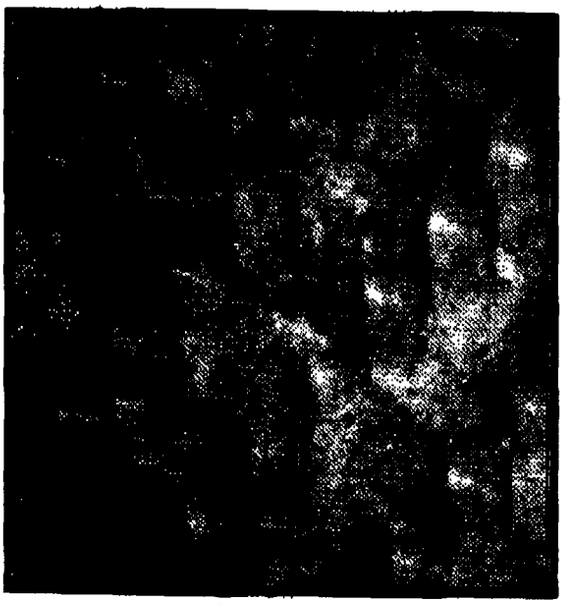

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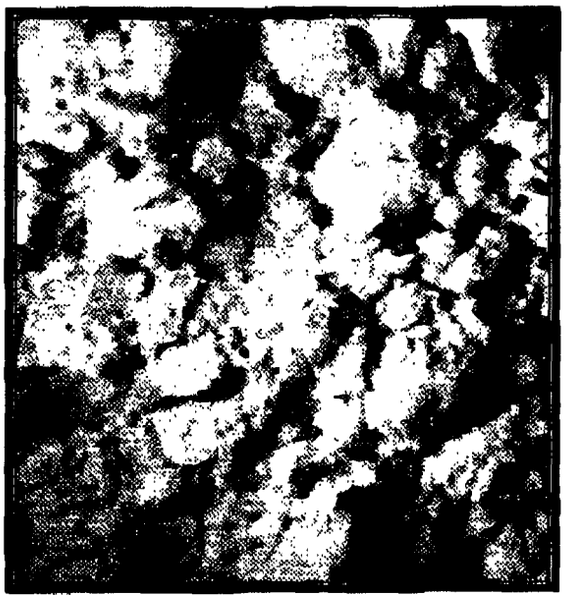

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